

WHAT IS CLAIMED IS:

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1. A display device for a vehicle having a seat,
comprising:
5 an assembly housing adapted to mount at a rear portion
of the seat;
a receiver adapted to receive at least one of video and
audio signals from at least one external input device; and
at least one wireless transmitter operatively coupled
10 to said receiver, adapted to wirelessly transmit the audio
signals to at least one wireless headphone set, wherein said
display device is adapted to reproduce the video signals.

2. The display device according to claim 1, wherein
15 the wireless signals are at least one of radio frequency and
infrared signals.

3. The display device according to claim 1, wherein
said receiver receives an input signal from an external
20 media source.

4. The display device according to claim 3, wherein
the external media source includes at least one of a

television tuner, a video cassette player (VCP), a compact disk (CD) player, a digital video disk (DVD) player, an AM/FM radio, a video game player, global navigation data, and e-mail.

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5. The display device according to claim 1, further comprising signal processing facilities adapted to perform at least one of signal processing and signal conversion, with respect to at least one of the audio signals and the video signals.

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6. The display device according to claim 5, wherein said signal processing facilities are adapted to perform at least one of digital signal processing, encoding, decoding, encrypting, decrypting, compressing, decompressing, analog-to-digital conversion (ADC), digital-to-analog conversion (DAC), and error correction.

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7. The display device according to claim 1, wherein said display device employs one of a liquid crystal display (LCD), light emitting diodes (LEDs), and a gas plasma.

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8. The display device according to claim 7, wherein said liquid crystal display is based upon one of active matrix technology and passive matrix technology.

5 9. The display device according to claim 1, wherein said display device employs touch screen technology.

10. The display device according to claim 1, wherein said display device includes one of picture-in-picture and split screen capability.

11. The display device according to claim 1, wherein said at least one wireless transmitter comprises at least one multiplexor adapted to select a specific input device whose audio output is to be wirelessly transmitted to the at least one wireless headphone set.

12. The display device according to claim 1, wherein said at least one wireless transmitter is adapted to wirelessly transmit the audio signals to the at least one wireless headphone set as a left audio channel and a right audio channel.

13. The display device according to claim 12, wherein
the left audio channel and the right audio channel
correspond to different frequencies.

5 14. The display device according to claim 1, wherein
said at least one wireless headphone set comprises a
plurality of wireless headphone sets, and said at least one
wireless transmitter is adapted to wirelessly transmit the
audio signals to each of the plurality of wireless headphone
10 sets as a left audio channel and a right audio channel, each
of the channels having a different frequency for each of the
plurality of wireless headphone sets.

Sub G2 > 15. The display device according to claim 1, wherein
15 said bus comprises a video bus and an audio bus.

16. The display device according to claim 1, wherein
said video bus is coupled to said display device and said
audio bus is coupled to said at least one wireless
20 transmitter.

Sub B1 > 17. The display device according to claim 1, wherein
15 said at least one wireless transmitter comprises an optical

transmitting device and the at least one wireless headphone set comprises a photosensitive device.

18. The display device according to claim 1, wherein
5 said at least one wireless transmitter and the at least one wireless headphone set comprise an antenna.

19. The display device according to claim 1, wherein
the at least one wireless headphone set comprises a digital-
10 to-analog converter.

20. The display device according to claim 1, wherein
said at least one wireless transmitter is adapted to
transmit the audio signals based on Code-Division Multiple
15 Access (CDMA) technology.

21. The display device according to claim 20, further
comprising signal processing facilities, and wherein at
least some CDMA operations are performed by said signal
20 processing facilities.

22. The display device according to claim 20, wherein
left audio channels and right audio channels of the audio
signals are coded separately.

5 23. The display device according to claim 20, wherein
the at least one wireless headphone set comprises a selector
for selecting one of a plurality of audio signals for audio
reproduction.

10 24. The display device according to claim 20, wherein
the at least one wireless headphone set comprises at least
one of a Walsh code generator and pseudo random number (PN)
sequence generator for decoding the audio signals.

15 Sub A3
25. A display device for a vehicle having a seat,
comprising:
an assembly housing adapted to mount at a rear portion
of the seat;
a video bus adapted to couple video signals from
20 external media sources;
an audio bus adapted to couple audio signals from the
external media sources;

~~a wireless transmitter operatively coupled to said audio bus, adapted to wirelessly transmit the audio signals to a plurality of wireless headphone sets, wherein said display device is adapted to reproduce the video signals.~~

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26. A display device for a vehicle having a seat, comprising:

an assembly housing adapted to mount at a rear portion of the seat;

10 a bus adapted to couple at least one of video and audio signals from each of a plurality of external input devices;

15 a wireless transmitter operatively coupled to said bus, adapted to wirelessly transmit the audio signals to at least one wireless headphone set, wherein said display device is adapted to reproduce the video signals.

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